



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/750,222

12/31/2003

Valerie Guralnik

256.186US1

6645

21186 7590 12/27/2006
SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.
P.O. BOX 2938
MINNEAPOLIS, MN 55402

EXAMINER

BHAT, ADITYA S

ART UNIT

PAPER NUMBER

2863

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
--	-----------	---------------

3 MONTHS

12/27/2006

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/750,222	GURALNIK ET AL.	
	Examiner	Art Unit	
	Aditya S. Bhat	2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 and 30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6, 8, 16-18, 21 and 30 is/are rejected.
- 7) ☒ Claim(s) 4, 5, 7, 9-15, 19, 20 and 22-28 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/7/2006</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Claims 18 and 19 are objected to because of the following informalities: The term (for new bad actors) in claim 18, line 1 should be removed. Parenthesis around the phrase "when new bad actor(s) are added" is not needed. Appropriate correction is required.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-15 and 30 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The claims are directed to a judicial exception; as such, pursuant to the Interim Guidelines on Patent Eligible Subject Matter (MPEP 2106)), the claims must have either physical transformation and/or a useful, concrete and tangible **result**. The claims fail to include transformation from one physical state to another. Although, the claims appear useful and concrete, there does not appear to be a tangible result claimed. Merely finding a cluster of bad actors related to the event to identify the event would not appear to be sufficient to constitute a tangible result, since the outcome of the "finding a cluster of bad actors related to the event to identify the event" step has not been used in a disclosed practical application nor made available in such a manner that its usefulness

Art Unit: 2863

in a disclosed practical application can be realized. As such, the subject matter of the claims is not patent eligible.

Please view the following guidelines to overcome 35 U.S.C. 101 rejection made in this office action in MPEP 2106 and/or

<http://www.uspto.gov/web/offices/com/sol/og/2005/week47/patgupa.htm>

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 6,8, 16-18, 21 and 30 are rejected under 35 U.S.C. 102(e) as being anticipated by Hsiung et al. (USPN 6,853,920).

With regards to claims 1 and 16, Hsiung et al. (USPN 6,853,920) teaches a system and method of identifying events in a process, comprising:

running a principal component analysis (Col. 63, lines 53-55) model on sensor data from the process; (col. 63, lines 63-65)

calculating statistics related to the model; (col. 63, lines 57-59) (col. 70, lines 3-10)

determining if an event is occurring; (Col.63, lines 59-62) and

finding a nearest cluster of bad actors (col. 21, line 45) related to the event to identify the event. (Col.21, lines 44-49)

It should be noted that the term "bad actors" has not been explicitly defined in the specification, and is therefore given the broadest reasonable interpretation based on the terms dictionary definition.

With regards to claim 30, Hsiung et al. (USPN 6,853,920) teaches a method of identifying events in a process, the method comprising:

running a principal component analysis(Col. 63, lines 53-55) model on sensor data from the process(col. 63, lines 63-65)

calculating statistics related to the model; (col. 63, lines 57-59) (col. 70, lines 3-10)

determining if a process event is occurring; (Col.63, lines 59-62) as a function of one or more process states being outside of normal range; (col. 21 lines 44-50) and

finding a nearest cluster of bad actors (col. 21, line 45) related to the event to identify the event. (Col.21, lines 44-49)

With regards to claims 2 and 17, Hsiung et al. (USPN 6,853,920) teaches a nearest cluster of bad actors comprises comparing (col.1 line 23) the bad actor vectors to known clusters in a library (col. 6, lines 8-9) of clusters for bad actors. (Col. 1, lines 21-26)

With regards to claims 3 and 18, Hsiung et al. (USPN 6,853,920) teaches identifying a sequence of cluster matches; (col.1,lines 23-25) and

correlating the sequence of cluster matches to known events. (col.1,lines 23-25)

With regards to claim 6, Hsiung et al. (USPN 6,853,920) teaches a cluster is limited to a predetermined number of bad actors. (tables 5 and 10)

With regards to claims 8 and 21, Hsiung et al. (USPN 6,853,920) teaches the statistics comprise Q (residual error) (table 5) (col.73, lines5-10) and T2 (unusual variance)(Col. 73, line 23-25)(table 5).

Allowable Subject Matter

Claims 4-5,7, 9-15, 19-20 and 22-28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claims 4-5,7, 9-15, 19-20 and 22-28:

The primary reason for the allowance of claims 4 and 19 is the inclusion of the method steps of: determining if a cluster needs to be split when new bad actors are added; and splitting the cluster into two clusters using a goodness of fit algorithm. It is this/these features found in the claim(s), as they are claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes this/these claim(s) allowable over the prior art.

The primary reason for the allowance of claims 5 and 20 is the inclusion of the method steps of: determining if a new event category is encountered; and broadening limits for the sequence of clusters. It is this/these features found in the claim(s), as they are claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes this/these claim(s) allowable over the prior art.

The primary reason for the allowance of claim 7 is the inclusion of the method steps of: predetermined number of bad actors is ten. It is this feature found in the claim, as it is claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes this claim allowable over the prior art.

The primary reason for the allowance of claims 9 and 22 is the inclusion of the method steps of: using a feature scoring scheme to identify top contributors of bad actors. It is this/these features found in the claim(s), as they are claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes this/these claim(s) allowable over the prior art.

Claim 5 is allowed due to their dependency on claim 4.

Claims 10-15 are allowed due to their dependency on claim 9.

Claim 20 is allowed due to their dependency on claim 19.

Claims 23-28 are allowed due to their dependency on claim 22.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

Applicant's arguments with respect to claims 1-28 and 30 have been considered but are moot in view of the new ground(s) of rejection. With regards to the 101 rejection, the rejection has been rewritten for clarification purposes.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aditya S. Bhat whose telephone number is 571-272-2270. The examiner can normally be reached on M-F between 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on 571-272-2269. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Aditya Bhat
December 21, 2006


JOHN E. BARLOW, JR.
PRIMARY EXAMINER
GROUP 2100